Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A color imaging device comprising an array of light sensitive elements:

a first type of element sensitive to a blue spectral region;

a second type of element sensitive to a red spectral region;

a third type of element sensitive to a green spectral region; ~~and~~

a fourth type of element sensitive to a blue-green portion of said spectral region~~.~~ ; and

wherein the blue, green, and blue-green spectral region are substantially non-overlapping.

2. (original) A color imaging device as in claim 1 wherein said light sensitive elements are comprised of a photosensor and a transmissive color filter.

3. (original) A color image sensor comprising:

a substantially planar array of solid state light sensitive elements; and

a filter mosaic made up of individual filter elements which are superposed in one-to-one registry on said light sensitive elements, such mosaic being comprised of:

a first type of filter element transparent to green;

a second type of filter element transparent to red;

a third type of filter element transparent to blue;

a fourth type of filter element transparent to blue-green; and

wherein such filter elements are arranged in repeating patterns in two perpendicular directions throughout substantially the entire imaging area of the sensor.

4. (original) A color imaging device as in claim 3 wherein said pattern is:

R G B B-G
G R B-G B
B B-G R G
B-G B G R

5. (currently amended) A color imaging device comprising:

a first digital camera comprising a first sensor array and a first color filter for filtering all light except light associated with a ~~first~~ red spectral region;

a second digital camera comprising a second sensor array and a second color filter excluding all light except that associated with a ~~second~~ green spectral region;

a third digital camera comprising a third sensor array and a third color filter for filtering all light except light associated with a ~~third~~ blue-green spectral region; and

a fourth digital camera comprising a fourth sensor array and a fourth color filter for filtering all light except light associated with a ~~fourth~~ blue spectral region.

6. (currently amended) A digital camera comprising:

a sensor array;

a color filter wheel; and

wherein said color filter wheel selectively transmits light associated with four substantially non-overlapping spectral regions.

7. (currently amended) A digital camera comprising:

a sensor array; and

an electronically switchable electro-optic filter capable of selectively transmitting light from four spectral regions.

8. (currently amended) A digital camera comprising:

~~at least one dichroic~~ an X-cube beamsplitter;

a first sensor array which receives light from said ~~dichroic~~ X-cube beamsplitter in a first spectral region;

a second sensor array which receives light from said ~~dichroic~~ X-cube beamsplitter in a second spectral region;

a third sensor array which receives light from said ~~dichroic~~ X-cube beamsplitter in a third spectral region; ~~and~~

a fourth sensor array which receives light from said ~~dichroic~~ X-cube beamsplitter in a fourth spectral region~~.~~ ;

a color filter for blocking light of said first spectral regions; and

wherein said first, second, third, and fourth spectral regions are substantially non-overlapping.

9. (cancelled)

10. (currently amended) A digital camera comprising:

a first photosensor array;

a first color filter array comprised of ~~a first~~ red and ~~second~~ green color filters;

a second photosensor array; and

a second color filter array comprised of ~~third~~ blue and ~~fourth~~ blue-green color filters.

11. (original) A color imaging device comprising an array of light sensitive elements:

a first type of element sensitive to a cyan spectral region;

a second type of element sensitive to a magenta spectral region;

a third type of element sensitive to a yellow spectral region;

a signal processing unit which calculate a red, green, blue, and blue-green value from signals to said signal processor from said first, second, and third element.

12. (original) A color imaging device as in claim 11 wherein said light sensitive elements are comprised of a photosensor and a transmissive color filter.

13. (original) A color imaging device as in claim 12 wherein said transmissive color filter for said cyan spectral region is between 400 and 600nm.

14. (original) A color imaging device as in claim 12 wherein said transmissive color filter for said magenta spectral region is between 400 to 500 nm and 600 to 700nm.

15. (original) A color imaging device as in claim 12 wherein said transmissive color filter for said yellow spectral region is between 500 to 700nm.

16. (original) A color imaging device as in claim 11 wherein said red value is calculated from magenta and yellow.

17. (original) A color imaging device as in claim 11 wherein said green value is calculated from cyan and yellow.

18. (original) A color imaging device as in claim 11 wherein said blue value is calculated from cyan and magenta.

19. (original) A color imaging device as in claim 11 wherein said blue-green value is calculated from cyan.

20. (original) A color imaging device comprising an array of light sensitive elements:

a first type of element sensitive to a blue (B) spectral region;

a second type of element sensitive to a red (R) spectral region;

a third type of element sensitive to a green (G) spectral region;

a fourth type of element sensitive to a cyan (C) portion of said spectral region;

wherein said light sensitive elements are comprised of a photosensor and a transmissive color filter; and

wherein said transmissive color filter are arranged in a pattern of:

R G B C
G R C B
B C R G
C B G R

21. (original) A color imaging device as in claim 20 wherein the spectral range of said cyan is 470 to 530 nm.

22. (currently amended) A color imaging device comprising:

a first sensor array and a first color filter for passing only light associated with a ~~first~~ red spectral region;

a second sensor array and a second color filter for passing only light associated with a ~~second~~ green spectral region;

a third sensor array and a third color filter for passing only light associated with a ~~third~~ blue-green spectral region; and

a fourth sensor array and a fourth color filter for passing only light associated with a ~~fourth~~ blue spectral region.

23. (new) A digital camera comprising:

a first photosensor array;

a first color filter array comprised of red and blue color filters;

a second photosensor array; and

a second color filter array comprised of green and blue-green color filters.